ELSEVIER International Journal of Mass Spectrometry and Ion Processes 169/170 (1997) vii–viii

International Journal of Mass Spectrometry and Ion Processes

CONTENTS

Special Issue: Matrix-assisted laser desorption/ionization mass spectrometry

Preface ... ix

Further studies of in-source fragmentation of peptides in matrix-assisted laser desorption–ionization
R.S. Brown, J. Feng and D.C. Reiber (Logan, UT, USA) ... 1

Hysteresis effects observed in MALDI using oriented, protein-doped matrix crystals
I. Fournier (Paris, France), R.C. Beavis (New York, NY, USA), J.C. Blais, J.C. Tabet and G. Bolbach (Paris, France) ... 19

Investigations of 2,5-DHB and succinic as matrices for IR and UV MALDI. Part: I UV and IR laser ablation in the MALDI process
J. Kampmeier, K. Dreisewerd, M. Schürenberg and K. Strupat (Münster, Germany) ... 31

Investigations of 2,5-DHB and succinic acid as matrices for UV and IR MALDI. Part II: Crystallographic and mass spectrometric analysis
K. Strupat, J. Kampmeier and V. Horneffer (Münster, Germany) ... 43

Matrix-assisted laser desorption and ionization in the O–H and C=O absorption bands of aliphatic and aromatic matrices: dependence on laser wavelength and temporal beam profile
R. Cramer (Münster, Germany), R.F. Haglund Jr (Nashville, TN, USA) and F. Hillenkamp (Münster, Germany) ... 51

Laser-induced acoustic desorption
V.V. Golovlev, S.L. Allman, W.R. Garrett, N.I. Taranenko and C.H. Chen (Oak Ridge, TN, USA) ... 69

MALDI induced saturation effects in chevron microchannel plate detectors
A. Westman, G. Brinkmalm and D.F. Barofsky (Corvallis, OR, USA) ... 79

An ion-to-photon conversion detector for mass spectrometry
F. Dubois, R. Knochenmuss and R. Zenobi (Zürich, Switzerland) ... 89

MALDI mass spectrometry of biomolecules and synthetic polymers using alkali hexacyanoferrate (II) complexes and glycerol as matrix
P. Zöllner, G. Stübiger, E.R. Schmid, E. Pittenauer and G. Allmaier (Vienna, Austria) ... 99

Development of methods for the charge-derivatization of peptides in polyacrylamide gels and membranes for their direct analysis using matrix-assisted laser desorption–ionization mass spectrometry
J.R. Strahler, Y. Smelyanskiy, G. Lavine and J. Allison (East Lansing, MI, USA) ... 111

Peptide sequencing of charged derivatives by postsource decay MALDI mass spectrometry
B. Spengler, F. Luetzenkirchen, S. Metzger, P. Chaurand, R. Kaufmann (Dusseldorf, Germany), W. Jeffery, M. Bartlett-Jones and D.J.C. Pappin (London, UK) ... 127

Alternative labeling method for peptide ladder sequencing using matrix-assisted laser desorption–ionization Fourier transform mass spectrometry
S. Schürch, J.R. Scott and C.L. Wilkins (Riverside, CA, USA) ... 141

Rapid micro-scale proteolysis of proteins for MALDI-MS peptide mapping using immobilized trypsin
J. Gobom, E. Nordhoff (Odense, Denmark), R. Ekman (Moelndal, Sweden) and P. Roepstorff (Odense, Denmark) ... 153

Approaches to the characterization of membrane channel proteins (porins) by UV MALDI-MS
V. Schnaible, J. Michels, K. Zeth, J. Freigang, W. Welte, S. Bühler, M.O. Glocker and M. Przybylski (Konstanz, Germany) 165

Matrix-assisted laser desorption–ionization time-of-flight mass spectrometry in the subunit stoichiometry study of high-mass non-covalent complexes
M. Moniatte (Strasbourg, France), C. Lesieur, B. Vécsey-Semjén (Genève, Switzerland), J.T. Buckley (Victoria, BC, Canada), F. Pattus (Illkirch, France), F.G. van der Goot (Genève, Switzerland) and A. Van Dorsselaer (Strasbourg, France) ... 179

The use of MALDI mass spectrometry to characterize synthetic protein conjugates
T. Keough, M.P. Lacey, G.M. Trakshel and T.N. Asquith (Cincinnati, OH, USA) ... 201

The utility of nonspecific proteases in the characterization of glycoproteins by high-resolution time-of-flight mass spectrometry
P. Juhasz and S.A. Martin (Framingham, MA, USA) ... 217

Enhancement of charge remote fragmentation in protonated peptides by high-energy CID MALDI-TOF-MS using "cold" matrices
E. Stimson, O. Truong, W.J. Richter, M.D. Waterfield and A.L. Burlingame (London, UK) ... 231

Application of MALDI and PSD to the structure determination of adducts between DNA bases and the carcinogen 7*H*-dibenzo[*c,g*]carbazole
J.K. Gooden, J. Byun (St. Louis, MO, USA), L. Chen, E.G. Rogan, E.L. Cavelieri (Omaha, NE, USA) and M.L. Gross (St. Louis, MO, USA) 241
Glycoprotein analysis by delayed extraction and post-source decay MALDI-TOF-MS
A. Tsarbopoulos (Kenilworth, NJ, USA), U. Bahr (Frankfurt, Germany), B.N. Pramanik (Kenilworth, NJ, USA) and M. Karas (Frankfurt, Germany) 251
Identification of modified peptides by metastable fragmentation in MALDI mass spectrometry
M. Schnölzer and W.D. Lehmann (Heidelberg, Germany) 263
Diffusive transfer to membranes as an effective interface between gel electrophoresis and mass spectrometry
R.R. Ogorzalek Loo, C. Mitchell, T.I. Stevenson, J.A. Loo and P.C. Andrews (Ann Arbor, MI, USA) 273
Direct mass spectrometric peptide profiling and sequencing of nervous tissues to identify peptides involved in male copulatory behavior in *Lymnaea stagnalis*
K. Dreisewerd (Amsterdam, The Netherlands), R. Kingston, W.P.M. Geraerts and K.W. Li (Manchester, UK) 291
Factors influencing oligonucleotide stability in matrix-assisted laser desorption/ionization (MALDI) mass spectroscopy
W. Tang, J. Krause, L. Zhu and L.M. Smith (Madison, WI, USA) 301
Depurination of DNA and matrix-assisted laser desorption/ionization mass spectrometry
I.G. Gut (Berlin, Germany) 313
Direct detection of synthetic and biologically generated doubled-stranded DNA by MALDI-TOF MS
D.P. Little (San Diego, CA, USA), A. Jacob, T. Becker (Hamburg, Germany), A. Braun, B. Darnhofer-Demar (San Diego, CA, USA), C. Jurinke, D. van den Boom and H. Köster (Hamburg, Germany) 323
Sequencing of modified oligonucleotides using in-source fragmentation and delayed pulsed ion extraction matrix-assisted laser desorption ionization time-of-flight mass spectrometry
B.H. Wang, C.E. Hopkins, A.B. Belenky and A.S. Cohen (Cambridge, MA, USA) 331
High sensitivity mass spectral characterization of glycosphingolipids from bovine erythrocytes, mouse kidney and fetal calf brain
H. Perreault (Cambridge, MA, USA), X.L. Hronowski (Boston, MA, USA), O. Koul, J. Street, R.H. McCluer (Waltham, MA, USA) and C.E. Costello (Cambridge, MA, USA) 351
Analysis of C_{60} oxides and $C_{120}O_n$ ($n = 1, 2, 3$) using matrix assisted laser desorption–ionization Fourier transform mass spectrometry
S.G. Penn, D.A. Costa, A.L. Balch and C.B. Lebrilla (Davis, CA, USA) 371
MALDI FTMS analysis of polymers: improved performance using an open ended cylindrical analyzer cell
M.L. Easterling, T.H. Mize and I.J. Amster (Athens, GA, USA) 387

Author Index 401

Subject Index 403